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"Longevity of Detrital Plant Pigments in a Shallow Estuary"

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(illus. 15 min., 2 x 2)

Pigments in heat-killed phytoplankton (chlorophyll, carotenoid and other substances absorbing at wavelengths used to measure chlorophyll and carotenoid) bleached slowly in darkness and rapidly when exposed to sunlight. At surface illumination, bleaching was 98% or more per day Even in midwinter at ca. 3% of surface illumination, bleaching was ca. 20% per day. Most of the chlorophyll and carotenoid associated with suspended matter in the shallow and moerately clear estuary of Newport River, North Carolina, must represent organisms which were either living at the time of measurement or dead no longer than a day or two.